REMARKS

In response to the Office Action, Applicant has:

- Amended claims 1-3, 8-10, 13, 15 and 16;
- Cancelled pending claims 4, 6, 7, 11, 12, 14, 32 and 33;
- Cancelled withdrawn claims 18-31; and
- Added new claims 34-44.

The cancellation of claims is without prejudice to filing one or more continuing applications (e.g., a divisional application directed to the now cancelled device claims).

Applicant recognizes that claim 16 has been withdrawn from consideration. However, as it depends from 13, 8 and 1 it is requested that the withdrawal be reconsidered. The amendment of this claim is for consistency with the amendments to the parent claims and claim 15.

It is submitted that the rejections under Section 112 are moot in view of the amendments to the claims. For instance, claim 1 (as previously amended) only specified "by radiation" in sub-sections b. and d. Now this claim specifies a "first source of radiation" and a "second source of radiation". Corresponding amendments have been made to the non-cancelled dependent claims. For instance, claim 15 now specifies "irradiating said surrounding annulus with ions from a third source of radiation."

The rejection of the claims under Section 103(a) as being unpatentable over Kumakura et al. in view of Bawa et al. is traversed. Bawa et al. differs from Applicant's claimed invention in that they form surface relief in a monomer (a liquid) as the monomer is undergoing polymerization. As set forth in col. 2, *ll.* 26-31: "the monomer polymerizes rapidly in the areas under the transparent parts of the mask and more slowly in the areas under the opaque pattern. Thus, with the mask shown in Fig. 1, the monomer will polymerize rapidly and form a hard polymer in all regions except in the four radial lines corresponding to the mask pattern." See also, col. 2, *ll.* 40-43: "As monomer is rapidly consumed in the clear areas, unreacted monomer from the masked regions migrates to the regions of the more rapid polymerization." The end result of the polymerization process is a polymer (a solid) with surface relief. If Applicant were claiming forming surface relief by polymerization of a monomer (and, for the purpose of this argument, not considering the remaining limitations in Applicant's claim 1) then Bawa et al. would be relevant. However, Applicant is forming surface relief at an arbitrarily later stage using a different irradiation process. Specifically, Applicant is forming surface relief after the monomer has been polymerized into a polymer. Once one has a polymer the process of Bawa et al. will not work. The irradiation process used by Bawa et al. can not, of necessity, form surface relief in a polymer, because the polymer is the end product of the process of Bawa et al. In sum, Bawa et al. utilizes radiation to form a polymer from a monomer while Applicant utilizes radiation to modify a pre-existing polymer.

With reference to Claim 1 (Currently Amended), Applicant starts with a polymer ("providing a polymer film having first and second surfaces"). Subsequently, Applicant forms surface relief in this same polymer ("forming surface relief in said polymer film"). Thus, Applicant's claimed process utilizes radiation to transform a polymer having a set of characteristics into a polymer having such characteristics plus additional characteristics. Applicant's claimed process for the formation of surface relief provides process flexibility in that such surface relief (in a polymer) can be formed either before or after the formation of tracks or pores (also in a polymer), as set forth in sub-sections b. and c. of claim 1. Because neither tracks nor pores can be formed in a liquid, the foregoing is not possible with the monomer curing process of Bawa et al.

In addition to the above distinctions between the Applicant's process and the process of Bawa et al. with regard to the formation of surface relief, Applicant's process differs from that of Kumakura et al. in view of Bawa et al. in subsequent dependent claims. In particular, neither Kumakura et al. nor Bawa et al. disclose:

- the step of "reducing the transmission...to at least certain wavelengths of light" (claims 13 and 40);
- the step of "irradiating...with ions from a third source of radiation to form a buried opaque layer" (claims 15 and 41);
- the step of forming "a diffraction grating" (claim 16);
- the step of "etching" as part of the process of forming surface relief (claims 34 and 43);
- the step of "widening at least some of said pores to dimensions wide enough to permit the ingrowth of corneal tissue" (claims 39 and 42); and
- the use of x-rays (claims 3 and 44).

In addition to the foregoing, neither Kumakura et al. nor Bawa et al. disclose the steps of forming two sets of pores as set forth in claims 35-39.

In view of the foregoing it is submitted that the pending claims are in condition for allowance. For allowance, Applicant requests that the claims be renumbered in the following sequence: 1-3, 10, 34-42, 9, 8, 43, 13, 15-17 and 44.

If the Primary Examiner has any questions or comments he is requested to contact the undersigned at 505-768-7375.

Respectfully submitted,

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